



NOVEMBER 4, 2014

14-3923.00

EXECUTIVE SUMMARY**EXISTING CONDITIONS**

Walker was engaged by the Borough of State College to determine how future development, specifically those projects identified in the Master Plan, will impact existing parking conditions in the Downtown area, how those changes will affect parking operations and how to successfully incorporate the findings and recommendations of the Comprehensive Parking Study into the Borough's long term development strategy. In order to achieve these goals, Walker proposed a multi-prong parking approach.

The initial phase focused on data collection. Walker conducted interviews with representatives from various community interests, businesses, civic organizations, municipal leaders, and staff in order to gather qualitative data related to current and future parking in the downtown area. In addition to discussing existing conditions and future goals, Walker conducted a comprehensive parking survey in order to understand current parking supply and demand within the 46-block Study Area.

There are approximately 7,350 parking spaces in the downtown area, including more than 1,500 public structured spaces in four garages. The total supply is adjusted to account for an operating cushion, resulting in an "effective" supply. This effective supply assumes that every last space in the system cannot be used efficiently, due to issues such as mis-parked cars, construction, circulation problems, snow, etc. Essentially, a parking system is at its "effective" capacity before it reaches 100 percent occupancy. In the Borough, the effective parking supply is 6,834 spaces.

Occupancy data was collected on a typical weekday and a football Saturday during the Fall of 2013. Data was collected at 10:00 am, 2:00 pm, 5:00 pm, and 8:00 pm in order to identify peak parking conditions. Peak weekday occupancy occurred with 4,807± vehicles parked or 65 percent occupancy around 10:00 am. During the PSU v. Purdue Football Game on November 16th, 2013, peak parking demand was recorded around 2:00 pm with 67% of spaces occupied, or 4,960 spaces.

Walker frequently recommends designing the parking supply to satisfy at least the 85th percentile level of activity. This level is usually equivalent to a very busy day that may occur once or twice a month. Because the survey day (the day data was collected), does not always represent design conditions, the observed weekday and Saturday parking demand is adjusted based on historical data to account for design day conditions. Walker compared the parking demand recorded on the survey day to historical data collected by the Borough at the Pugh Street, Fraser Street, and Beaver Street Garages and adjusted the observed public and private occupancy to represent design conditions in the downtown area.

During design conditions, we anticipate a peak weekday parking demand of 5,915 spaces (a 23% increase over survey day conditions). This equates to an 80% occupancy rate. The design day occupancy is compared to the effective parking supply in order to determine parking adequacy. A peak weekday parking adequacy occurred with a surplus of 919



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spaces during the 10 o'clock hour, however there were blocks that experience minor shortages.

Similar to the weekday process, Walker compared the occupancy recorded on the weekend survey day, November 16th, 2013, to historic weekend parking occupancy data from each of the three public garages. Based on the annual data, the public parking demand observed on our weekend survey day in the three municipal garages represents the 95th percentile level of weekday activity. There were only five weekend days that experienced parking occupancy levels greater than the survey day, three football games, including Homecoming, Moving On, and the Arts Festival¹.

While Walker typically suggests designing parking to support the 85th percentile activity level, it is also important to understand what a worst case scenario would look like. State College often experiences event level parking demand associated with football games and other special events. Historical data indicates that public parking demand was highest on October 12th, 2013, with 1,357 spaces occupied in three of the four public garages; however there were about seven days last year (weekday and weekend) when parking volumes exceeded 1,300 spaces in the municipal garages. In order to understand parking conditions during the highest levels of activity, Walker adjusted the weekend survey day demand to reflect 100th percentile level of weekend activity. When compared to the 100th percentile day, the survey day parking demand was 40% lower.

We adjusted the observed public and private occupancy by 40% to represent design conditions in the downtown area on a Saturday. During design conditions, we anticipate a peak weekend parking demand of 6,941 spaces. This equates to a 94% occupancy rate. Again, in order to understand the adequacy of the parking system to support weekend design demand, the design day demand was compared to the effective parking supply, resulting in an approximately 107 space deficit.

FUTURE CONDITIONS

Future parking demand in the Borough was based on a combination of anticipated future development and a general assumed overall growth rate of 1% in the downtown area. In addition to projection future parking demand, Walker adjusted the future parking supply in the downtown area based on the assumed developments. Walker estimated the total available parking supply will be reduced to 7,125 spaces. This figure includes the demolition of the Pugh Street Garage as well as the introduction of new parking with each development as required by code.

¹ While November 16th represents the 95th percentile level of weekend activity, with only five weekend days experiencing higher occupancy levels, it only represents the 70th percentile level of activity when compared to the activity level for the year. There are 100 total days that experienced greater parking occupancy than November 16th.



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2017 DEMAND

Walker is projecting an overall occupancy rate of 89% or 6,412 spaces during weekday conditions in 2017. When compared to the future effective supply, a small surplus of 42 spaces is expected during the weekday. It is important to note that while an overall surplus is anticipated, Zone B is expected to experience a parking deficit.

By 2017, a peak weekend parking demand of 7,423 spaces is projected, resulting in an overall occupancy rate of 104% during weekend conditions. Zones A, B and D are expected to experience occupancy rates greater than 100%, especially Zone B where a 151% occupancy rate is projected. When the 2017 weekend parking demand is compared to the future effective supply, a 969-space deficit is expected during weekend conditions.

2019 DEMAND

In 2019, a 95% occupancy rate, or 6,738 occupied spaces, is anticipated for the Study Area as a whole. Similar to 2017, the majority of zones are expected to have sufficient parking to support demand. However, in Zone B, the projected occupancy rate exceeds 100%. Walker compared the 2019 projected parking demand to the future effective parking supply in order to determine parking adequacy. A parking deficit of 284 spaces is anticipated.

A 107% occupancy rate is anticipated for the Study Area as a whole by 2019 during peak weekend conditions. Similar to 2017, Zones A, B and D are projected to experience parking occupancy above 100%. The peak parking demand is expected to reach 7,604 spaces. When compared to the future effective supply of 7,125 spaces, a parking deficit of more than 1,300 spaces is anticipated. On a zone by zone basis, deficits are projected in Zones A, B, and D, with the largest deficit in Zone B.

2024 DEMAND

By 2024, a peak weekday parking demand of 7,133 spaces or 100% of capacity is projected for the Study Area. Walker determined the adequacy of the State College parking system by comparing the 2024 projected parking demand to the future effective parking supply. A parking deficit of 679 spaces is anticipated.

During peak weekend conditions, a 111% occupancy rate is projected for the Study Area in 2024. Parking occupancy rates are expected to exceed 100% in Zones A, B and D. It is important to remember that the parking occupancy levels for weekend conditions are based on 100th percentile design day conditions. During the majority of the year, parking occupancy levels will be less than the projected 7,944 occupied spaces. However, we anticipate five to ten days per year when demand will meet those levels. When the 2024 weekend parking demand is compared to the future effective supply, a parking shortage of 1,490 spaces is expected.

The figure below summarizes the peak weekday and weekend parking demand during current and future conditions.

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TASK 1 – EXECUTIVE SUMMARY



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	Survey	Weekday				Weekend				
		Design	2017	2019	2024	Survey	Design	2017	2019	2024
On-Street										
Supply	575	575	575	575	575	575	575	575	575	575
Effective Supply	488	488	488	488	488	488	488	488	488	488
Demand	328	407	415	427	450	598	618	628	661	661
Occupancy	57%	71%	72%	74%	78%	74%	107%	109%	115%	115%
Adequacy	160	81	73	61	38	60	(130)	(140)	(173)	(173)
Private										
Supply	4,916	4,916	5,242	5,242	5,242	4,916	5,242	5,242	5,242	5,242
Effective Supply	4,671	4,671	4,722	4,722	4,722	4,671	4,722	4,722	4,722	4,722
Demand	3,340	4,107	4,524	4,679	4,944	3,255	4,821	4,943	5,205	5,205
Occupancy	68%	84%	86%	89%	94%	66%	93%	94%	99%	99%
Adequacy	1,331	564	198	43	(222)	1,416	116	(221)	(483)	(483)
Public										
Supply	1,859	1,859	1,308	1,308	1,308	1,859	1,308	1,308	1,308	1,308
Effective Supply	1,675	1,675	1,244	1,244	1,244	1,675	1,244	1,244	1,244	1,244
Demand	1,139	1,401	1,473	1,632	1,739	1,277	1,984	2,033	2,078	2,078
Occupancy	61%	75%	113%	125%	133%	69%	152%	155%	159%	159%
Adequacy	536	274	(229)	(388)	(495)	398	(113)	(789)	(834)	(834)
Total										
Supply	7,350	7,350	7,125	7,125	7,125	7,350	7,125	7,125	7,125	7,125
Effective Supply	6,834	6,834	6,454	6,454	6,454	6,834	6,454	6,454	6,454	6,454
Demand	4,807	5,915	6,412	6,738	7,133	4,960	7,423	7,604	7,944	7,944
Occupancy	65%	80%	90%	95%	100%	67%	104%	107%	111%	111%
Adequacy	2,027	919	42	(284)	(679)	1,874	(969)	(1,150)	(1,490)	(1,490)



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RECOMMENDATIONS

Based on our analysis of current and future parking demand in the Borough of State College, Walker identified several Transportation Demand Management Strategies for the Borough to consider, including revitalizing the existing fee-in-lieu parking program, unbundling parking from office or housing development, implementing smart parking technologies such as multi-space meters and automated parking guidance systems to improve wayfinding, increase the usable capacity of the system, and improve revenue collection. Walker's recommendations also included implementing an employee cash-out program and implementing a parking benefit district.

In addition to the various TDM strategies available to the Borough, Walker also recommended evaluating the pricing strategies currently utilized in the downtown area. Alternative pricing strategies available include performance based pricing, which focuses on setting the true market rate of an individual space based on demand. This method presents several challenges for municipalities, including the technological requirements and overcoming initial merchant resistance.

Another alternative pricing strategy focuses on shifting users to alternative transportation modes, such as CATA. To decrease traffic congestion and encourage the utilization of the CATA system, the borough could raise the rates for parking in the downtown area to levels higher than the rate of the CATA transit system. By increasing the cost of parking to levels greater than the cost of taking public transportation, some patrons would be inclined to shift from driving to taking the bus. This method has limitations due to the current service routes of the transit system.